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HOME OFFICE

ACCIDENTS IN THE HOME

**Report of the Standing
Interdepartmental Committee on Accidents
in the Home**

LONDON: HER MAJESTY'S STATIONERY OFFICE

1953

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ACCIDENTS IN THE HOME

Report of the Standing

Interdepartmental Committee on

Accidents in the Home

1. In 1947 the Standing Interdepartmental Committee on Accidents in the Home was set up by the Home Secretary "to co-ordinate departmental action in connexion with the prevention of accidents in the home, and to maintain contact with unofficial organizations interested in the subject".

2. During the past five years the Committee has been able to gather together much information about the nature, extent, causes and cost of home accidents which has not previously been available in a convenient form. This information has been of great value to the Committee, both in providing a general picture of the scope of the problem, and in focusing attention on particular hazards. It also confirms the view which the Committee formed at an early stage of their work that the two most important causes of accidents in the home are faulty design and equipment and, in the broadest sense, human frailty; and that of the two, it is the human element—ignorance, carelessness and physical disability—that is the more important.

3. In tackling the problem of how to prevent home accidents, the Committee has sought to attack these two main causes by encouraging the introduction of safer designs for household equipment and by finding ways of helping people to understand and to accept the importance of safety precautions in the home. It is to this second object that this Report is directed, and it is hoped that the information which it contains will be of particular value as material for publicity for all the many organizations whom the Committee has found to be interested in the prevention of home accidents.

The size of the problem

4. During the 10 years from 1940 to 1949 over 60,000 people died from accidents in their homes compared with about 48,000 deaths on the roads—in fact since 1943 there have been well over 1,000 more fatal casualties each year in the home than on the roads. (See Appendix A.)

5. The majority of the victims are young children and old people: more than 25 per cent. being under 15 and more than 50 per cent. over 65. More children under 15 die from home accidents than from any single infectious disease: between the ages of one and five years, a fatal accident in the home is the third largest cause of death.

6. No accurate estimate of the number of non-fatal accidents is available, chiefly because of the difficulty of obtaining reliable and comprehensive information about accidents in the home, which, unlike those on the roads, are not notifiable. But from the figures available from certain limited areas, some idea can be gained of the possible total for the country as a whole.

7. For instance, in 1946, out of a population of 13,000 in a congested Birmingham area, 9 per cent. of the children under 10 and 3 per cent. of the adults were treated at the Birmingham Accidents Hospital for home accidents (4 per cent. of the total population of the area). Though it would in fact be wrong to assume that the accident rate for the country as a whole was as high as that for this area, these figures do give some indication of the possible scale of the problem.



8. The cost in terms of pain, disablement and death need hardly be emphasized, although it is perhaps not sufficiently appreciated how often the price is paid by children. But apart from the obvious humanitarian grounds for making every effort to cut down the number of these accidents, it should not be ignored that the annual toll of injury and death represents considerable financial loss both to the country and to the individual. No records are available of the man-hours lost to industry through home accidents or of the drain on personal income for the victim who cannot work and for his relatives who may have to stay at home to nurse him. But at the same hospital some 5,000 patients per annum (18 per cent. of the annual intake of the hospital) are the victims of home accidents. The median duration of their treatment is 9 days for out-patients, 20 days for in-patients (with a further 17 days out-patient's treatment). Falls and burns involve the longest treatment. The average length for a burn is 35 days; but a really bad burn—generally caused by clothing catching fire—means on average 50 days in hospital. The overall cost of treatment in this hospital alone during 1949 was estimated at £52,000. Although no precise assessment for the nation as a whole could properly be based on the records of one hospital, it has been inferred that the hospital treatment of home accidents throughout the country may cost something in the region of at least £4–5 million each year (the cost of in-patient treatment alone for burns and scalds amounting to nearly £1 million). To complete the picture there should be added the time spent by the family doctor, the health visitor, the district nurse, the home help and welfare officer, not to mention the possible claims for National Assistance and sick benefit.

The commonest kinds of accident

9. The commonest kinds of fatal accident in the home (based on the figures for 1951) are, in order of importance: falls 58 per cent., burns and scalds 13 per cent., suffocation 12 per cent., coal-gas poisoning 8 per cent. About nine-tenths of the falls, over half the burns and scalds, and nearly two-thirds of the coal-gas poisonings happen to old people over 65; while at least eight out of every ten suffocations and one in five of the burns and scalds happen to children under 5. Appendix C lists some of the ways these accidents can happen.

Contributory causes

10. Some interesting light is thrown on some of the contributory factors in two of the main types of accident, namely falls and burns, by the inquiry into home accidents made by the Domestic Accidents Panel of the Scientific Advisory Committee to the Ministry of Works in 1946–48, and by a national survey in England and Wales of the domestic heating used by households living in dwellings of medium and low rateable values at the beginning of 1952. This was carried out for the Building Research Station by the Social Survey.

11. The aim of the inquiry by the Domestic Accidents Panel was to find out how far building design was responsible for domestic accidents. Information was obtained from a wide variety of sources ranging from health visitors to housing managers, and including coroners' records, General Register Office statistics and help from many hospitals. The results of the inquiry showed some connexion between accidents involving falls and faulty building design and maintenance. It was found that 8 per cent. of the accidents covered by the inquiry were primarily due to faulty design (through such factors as the design of stairs including hand rails, single steps between different floor levels and the position of light switches on stairs and in passages) and a further 20 per cent. to poor maintenance, particularly of flooring, stair treads, hand rails and to inadequate lighting. But the majority of accidents seemed clearly due to the risks inherent in ordinary domestic activities, especially during busy periods. In the study of

some hundreds of accidents, mostly non-fatal, reported by hospital almoners and home visitors 60 per cent. happened in the kitchen or living room, while cooking or clothes washing was being done, or when tea had just been made. It is in conditions such as these that children are most easily burned or scalded.

12. The national domestic heating survey brought to light evidence of fairly widespread neglect of the simplest and most obvious precaution against burning accidents, the fireguard. It was found in the course of a survey into the use and cost of domestic heating that in over 1,000 households visited where a coal fire was alight, only 36 per cent. of those with children under 6, and 13 per cent. with children between 7 and 14, were using a fireguard; while a mere 7 per cent. of the homes with old people over 70 had guarded coal fires. It is hardly surprising that so many children and old people are killed, crippled and disfigured from burns each year.

The prevention of home accidents

13. Most home accidents could be avoided by the exercise of a little care and forethought and it is perhaps inevitable that the bulk of the victims are those who are least able to look after themselves. That the inexperience of childhood and the mental and physical disabilities of old age almost certainly account for a high proportion of the casualties, underlines the need for special care on the part of those who are in any way responsible for the safety of the young or the elderly. Even the most scrupulous care cannot of course eliminate every hazard from the average home, and the Committee has felt that while every effort should certainly be made to prevent unduly dangerous equipment from getting into the home, it is equally vital that people should be taught how to guard against the many hazards of everyday life. A certain amount can be done by planning and design to reduce the number of potential dangers in the home, but in the last resort it rests with the individual to take precautions which are often thought unimportant but on which the safety of himself or others may easily depend. From this point of view it is unfortunate that home accidents are less dramatic than road accidents; not only do they attract less publicity, but their greater variety precludes any simple remedy. The average individual has not only to learn how to prevent accidents in his home; he must first be convinced that the various dangers exist. (Details of current home safety publications are given in Appendix B.)

14. During the past year the danger of the unguarded fire has attracted particular attention, and there has recently been some further legislation on the subject. The Children and Young Persons Act, 1933, contained a provision aimed at preventing people in charge of children under seven from allowing the child to be in a room containing an inadequately protected open fire grate, without taking reasonable precautions against the risk of the child being burnt or scalded; this provision has now been amended by raising the age to 12 and extending it to "any heating appliance liable to cause injury to a person by contact therewith". Also, Parliament has passed the Heating Appliances (Fireguards) Act, 1952, aimed at prohibiting the sale or letting of prescribed kinds of gas fires, electric fires and oil heaters unless guarded in accordance with prescribed standards. This will help in ensuring, in future, the manufacture and supply of better guarded domestic appliances; but its effects will necessarily be gradual and it does not prevent the continued use of existing unguarded or ill-guarded fires and heaters in homes where they are already installed. Thus there is still a real need for members of households to guard against this danger in their own homes. Moreover, guards intended for general use may not ensure absolute safety in all circumstances and additional precautions will still be required where they are small children or old people.

15. Under section 1 (1) (f) of the Fire Services Act, 1947, arrangements are made by fire authorities (in England, counties and county boroughs) for the giving of advice on how to prevent fires and on means of escape in case of fire. These duties are usually performed by officers of the fire brigades specially trained for the purpose at the Fire Service College and known as Fire Prevention Officers. Their work covers a very wide field which includes the arranging of talks, demonstrations, film displays and exhibitions designed to educate the general public on how to prevent household accidents arising from fire.

16. The Home Office and Scottish Home Departments encourage and guide fire authorities in their fire prevention efforts. The publication by Her Majesty's Stationery Office of the booklet *Fire! Fire!* (see Appendix B) was followed up by the production and dissemination by the Home Departments, in conjunction with the Central Office of Information and the Scottish Information Office, of publicity material on the subject of fire in the home for the use of fire brigades in their local publicity campaigns. This material included a ten-minute film called *Every Five Minutes*; display sets illustrating the main fire risks in the home, and how to avoid them; posters; and a touring exhibition devised as a nucleus around which the fire brigades could plan their local fire prevention exhibitions. This publicity material has been very much appreciated by fire brigades, and they have made full use of it.

17. Research on fire prevention is carried out by the Joint Fire Research Organization. Details of a number of technical problems connected with fire safety which have been investigated by this organization are given in Appendix D.

18. In addition to statutory controls, which must necessarily be limited to those comparatively few hazards against which compulsory protection is justifiable and practicable, the work of the British Standards Institution has done much to raise the standard of safety in domestic equipment. Specifications which lay down basic standards of good workmanship, design and safety have been issued for a wide variety of domestic equipment, ranging from pressure cookers to step ladders, and from gas fires to ironing tables. Though they have no statutory force, they are generally adopted by reputable manufacturers. The British Standards Institution has also issued a number of Codes of Practice covering the installation of most domestic gas and electric equipment. These codes describe how the parts should be assembled and how the materials may be used to the best advantage—thus supplementing the specification in many cases where the method of installation is as important as the design and construction of the appliance itself. Compliance with British Standard Specifications and Codes of Practice thus ensures a high degree of safety, efficiency and economy; and it is clearly in the interests of every individual to use, wherever possible, appliances conforming with these standards (which in many, though not all, cases carry the Institution's certification mark). With the co-operation of the public, badly made or dangerous equipment could be driven off the market; and this is one of the fields in which publicity is important.

19. But however much may be done by statutory and voluntary control to eliminate unduly dangerous equipment, no amount of careful design can make equipment entirely foolproof; the final responsibility for seeing that accidents do not happen must rest with the individual. For this reason the Committee has always stressed the importance of publicity and propaganda, and has striven to bring home to the public the need for attention to those simple precautions which are so easily forgotten and which might so often have averted an accident.

20. Valuable work has been done in this field by the Royal Society for the Prevention of Accidents. The Society's aims are achieved partly by encouraging

and sponsoring the growth of local independent Home Safety Committees, partly through propaganda. Though Home Safety Committees are independent bodies, locally organized and financed, they are affiliated to the Society, from whom they may obtain literature, posters, lectures and advice on all aspects of domestic accident prevention. This propaganda material is also available to the general public (see Appendix B). In addition a Home Safety Group providing special facilities for obtaining teaching material on domestic accident prevention has recently been formed for health visitors, school nurses, midwives, district nurses and nursery matrons. The Society counts among its members a large number of organizations interested in home safety, ranging from youth organizations to nursing associations, representing housewives, hospitals and training colleges and embracing all sections of the public. The Society is thus able to maintain liaison and to exchange ideas with these bodies, many of whom include home safety propaganda amongst their normal functions.

21. Five years ago, in the year in which the number of fatal domestic accidents had climbed to over 6,000, the Home Secretary, speaking on the occasion of the Silver Jubilee of the Royal Society for the Prevention of Accidents, said that an accident could generally be attributed to one of three things, ignorance, carelessness or a bad appliance. This is no less true to-day; there are still far too many accidents each year, and too often they need not have happened if some one had realized the danger, or had taken more care, or had gone to the trouble of replacing badly designed or worn-out equipment.

22. There are many organisations who are helping to bring this lesson home to the public, but there are still more who could if they would; for every individual who has taken this lesson to heart there are a host whose ignorance—even indifference, is a potential threat, not only to themselves but to those around them. It is hoped that this Report may go some way to show how vitally important it is that everyone should play his or her part in preventing domestic accidents, and in persuading others to do the same.

APPENDIX A

(Figures supplied by the Registrar General)

(i) 1940-1949

Domestic accidents: annual deaths in England and Wales:—

1940	1941	1942	1943	1944	1945	1946	1947	1948	1949
7,451	6,851	6,058	5,560	5,646	5,732	5,715	6,202	5,278	5,437

Road accidents: annual deaths in England and Wales:—

6,706	7,000	5,191	4,171	4,492	4,005	4,161	4,187	3,859	4,128
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(ii) 1949-1951*

Domestic accidents: annual deaths in England and Wales:—

1949	1950	1951
4,891	5,086	5,483

Road accidents: annual deaths in England and Wales:—

4,103	4,523	4,698
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*Note : In 1949 additional information about the places of accidents became available and the basis on which the statistics of domestic and road accidents are calculated, was changed. The figures in (ii) are therefore not comparable with those given in (i).

APPENDIX B

PUBLICATIONS

(a) Pamphlets

The following pamphlet on fire prevention, prepared by the Interdepartmental Fire Prevention Committee and the Central Office of Information, is obtainable from H.M.S.O., York House, Kingsway, London, W.C.2 (P.O. Box 569, London, S.E.1) or through any bookseller, price 3d. (4½d. by post) :—

Fire ! Fire !

The following booklets, prepared by the Fire Protection Association, are obtainable free on application to the Association at 84 Queen Street, London, E.C.4.

Why Burn your Home ?

Burns in the Home

Electricity in the Home

The following pamphlets have been issued by the Royal Society for the Prevention of Accidents. Details of prices etc. are obtainable from the Society, at Terminal House, 52 Grosvenor Gardens, London, S.W.1.

Hints on the Safe Use of Electricity

Hints on the Safe Use of Gas

Hints on the Safe Use of Paraffin Appliances

Hints on the Safe Use of Solid Fuel

Steps to Home Safety

Suggested Safety Requirements for the Home

Home and Everyday Accidents

How to Prevent Fires

First Aid in the Home

Burns and Scalds

Falls

Poisons

Safety First for Baby

Just Arrived (Baby)

Congratulations Leaflet (Baby)

My Weight Card (Baby)

Now I can Walk (Toddlers)

From Grandson to Grandmother

(b) Posters

A poster on fire prevention is available to fire brigades and can be obtained from the Home Office (30 in. × 20 in. or 15 in. × 10 in.).

The following posters are issued by the Royal Society for the Prevention of Accidents. Details and prices are obtainable from the Society at the address given above.

<i>Subject</i>	<i>Title</i>
Size 30 in. × 20 in.:—	
First Aid	<i>General slogan</i> <i>Artificial respiration</i> <i>Burns and scalds (treatment)</i> <i>Severe bleeding (pressure points)</i>
Burns	<i>Guard open fires</i> <i>Warm the child but guard the fire</i> <i>Where there are children you must use a fireguard</i>
Scalds	<i>Put it out of reach</i> <i>His safety is your responsibility</i> <i>Scalding hot</i>
Electricity	<i>Danger—broken flex</i> <i>Don't interfere; call the electrician</i> <i>Let the electrician do it</i>
Falls	<i>More light, less accidents</i> <i>Clear up as you go</i>
Poison	<i>Poison! Beware!</i>
For the baby	<i>Please, for my safety</i>
Toddlers	<i>Now I can walk</i>
General	<i>The time for safety is all the time</i> <i>Parents—over 2,000 children</i> <i>What's wrong in Hazard House?</i>
Children	<i>The tale of Timothy (Wall frieze in 3 panels)</i>
Size 5 in. × 15 in.:— (fluorescent)	
Burns	<i>Danger comes swiftly—guard your fires</i>
Poisons	<i>Danger comes swiftly—lock away all drugs</i>

(c) Display Sets

You and Your Baby (12 panels)

Suitable for maternity and child welfare clinics, and available to Medical Officers of Health from the Circulation Section, Publications Division, Central Office of Information, Block 2, Montagu Mansions, Crawford Street, London, W.1 (no charge).

Accidents in the Home (3 panels)

Available from the Exhibitions Officer, Central Council of Health Education, Tavistock House, London, W.C.1 (10s. per week).

Twelve portable display sets are obtainable from the Crusader Insurance Company. Applications should be made to Miss I. H. Charley, S.R.N., S.C.M., H.V. Cert. R.S.I., Health Advisory Service, Crusader Insurance Company Ltd., 14 Pall Mall, London, S.W.1 (no charge).

Display sets (12 panels) are available to fire brigades from the Home Office (no charge).

(d) Films

Every Five Minutes (16 mm., 10 minutes)

Subject: the ways fires can be caused. Available (on hire) from the Central Film Library, Government Buildings, Bromyard Avenue, Acton, London, W.3. It is also available in 35 mm. for cinema showing from the Film Distribution Section, Central Office of Information, Norgeby House, 83 Baker Street, London, W.1.

Playing with Fire (16 mm., 11 minutes)

Subject: burns and scalds to children and how to prevent them (not suitable for showing to children). Available from the Central Film Library, Government Buildings, Bromyard Avenue, Acton, London, W.3.

Fiery Accidents (35 mm., 1 minute)

Subject: the guarding of household fires to protect children. This trailer film can be shown in cinemas with the agreement of the management. Available from the National Screen Service Ltd., Wallace House, 113 Wardour Street, London, W.1 (no charge).

Dangerous Ages (16 mm. and 35 mm., 4 minutes)

Subject: safety in the home.

The Human Factor (16 mm. and 35 mm., 14 minutes)

Subject: road and home safety.

Who Started It? (16 mm., 11 minutes), made by the London County Council.

Subject: how fire can be caused by carelessness.

These three films are available on hire from the Royal Society for the Prevention of Accidents, Terminal House, 52 Grosvenor Gardens, London, S.W.1.

APPENDIX C

SOME COMMON CAUSES OF ACCIDENTS

Falls

- (1) A dustpan and brush left on an ill-lighted staircase. Stairs should be kept clear and well lit.
- (2) A loop of flex across a living room. This is a double danger: the flex may be tripped over, or worn insulation might cause an electric shock.
- (3) A loose mat on a slippery floor. An old person who slips and falls may be fatally injured.
- (4) Loose stair carpets.

Burns and Scalds

- (5) An unguarded fire in a bedroom. It may easily set fire to the hem of a frock or nightdress and cause a fatal accident.
- (6) A saucepan handle sticking out over the edge of a stove. A child could scald itself badly by pulling the saucepan over.
- (7) A loose tablecloth which a child can reach and pull off, carrying with it teapots, hot pans, books or vases of flowers which might be on the table. Bad bruises or scalds can be caused in this way.

Electrocution

- (8) An electric fire or radio set in a bathroom. Electric appliances of all kinds are dangerous in bathrooms.

Poisoning

- (9) Medicines or garden chemicals left within reach of a child. A comparatively small amount of poison, which would not hurt an adult, can kill a child.

Suffocation

- (10) Down pillows for small babies. If the baby turns over it may suffocate. Many babies in fact die each year in this way.

Precautions on leaving the house

See that: your cigarette is out, the iron is unplugged, gas taps are turned off, fires are guarded, and the television and wireless are switched off, or better still, disconnected.

APPENDIX D

FIRE RESEARCH AND HOME SAFETY

Since its formation in 1947 the Joint Fire Research Organization of the Department of Scientific and Industrial Research and the Fire Officers' Committee has dealt with a number of problems of direct relevance to home safety. The Building Research Station is closely associated with some aspects of this work.

The research falls into two main categories: statistical analyses and experimental work.

I Statistical Analyses

The Annual Statistical Tables give a useful indication of the main causes of fires in the home and of the importance of the human factor. For example, approximately $7\frac{1}{2}$ per cent. of fires in buildings have been attributed to children playing with matches, $12\frac{1}{2}$ per cent. to smokers' materials, and almost 15 per cent. to fires in grates igniting clothing, bedding, furnishings and materials other than structural materials. The examples that follow have been taken mainly from *Fire Research* 1950 and 1951.

Among the chief causes of fires in post-war houses have been fires in grates (24 per cent.), electrical apparatus (18 per cent.), smokers' materials (9 per cent.), gas appliances (5 per cent.) and oil-burning appliances (5 per cent.). Nearly half the fires classified under "electrical apparatus" have been attributed to cookers and most of these were due to carelessness or ignorance of the risk in use. The annual rate of incidence of fires caused by radio sets (about 3 per 100,000 sets in use) has been fairly constant during the five years 1947-51. In the same period, largely because of improved layout and design, the rate for television sets has dropped from thirty-two times that for wireless sets to between three and four times that for wireless sets. Many fires have occurred in wireless sets when the sets have not been in use, indicating the value of the precaution of disconnecting from the mains.

Fires caused by oil-burning appliances accounted for 5 per cent. of the fires attended by Fire Brigades in a single year, 1948. Of these, 58 per cent. were caused by the use of blow-lamps in the course of house painting or plumbing, 28 per cent. by stoves and 14 per cent. by lamps, cookers and other oil-burning appliances.

Fires caused by liquid fuel gas amounted to 270 in the five years 1947-51. There were 29 fires while cylinders were being changed and 16 when leaks were being sought with a naked flame. The figures indicate a lack of appreciation of the risks involved when the gas is allowed to escape into the atmosphere. Use of this kind of gas in private dwellings is increasing.

II Experimental work

The experimental work includes primarily studies of the outbreaks of fires and has a practical bearing on house construction and equipment as well as on the behaviour of the occupants.

A study of the fire hazard of wooden panels in the vicinity of flue pipes was carried out, as a result of which it is possible to indicate a safe distance at which panels, such as the sides of cupboards, should be placed. It was found that an asbestos shield can be useful as a screen where it is not possible to remove combustible materials from the proximity of the flue, and that the shield is most efficient when separated from the panel by about half an inch.

Numerous tests on fibre insulating boards have stressed their high potential fire hazard and the vital importance of giving them appropriate treatment prior to use in the home. Treatment to reduce the risk of fire may comprise the application of special paints or distempers or impregnation with suitable solutions.

Tests have been made to find out the fire risk of different types of flex and cables used in domestic electrical installations. Comparative tests on plastic and rubber-insulated cables under conditions of external heating and current overloading showed that the plastic insulated cables were superior in their resistance to spread of flame, and that they did not continue to burn, as did the rubber-insulated ones, when the igniting source was removed.

Perhaps one of the most important single factors in home safety to-day is the prevention of clothes catching fire. Research on the fire retardant treatment of fabrics shows that, although effective treatments are available, there is none that could be generally applied without considerably increasing the cost of materials. It is considered that emphasis could most usefully be placed on improving the design of heating appliances, such as electric, gas and coal fires, on the use of well designed and fitted fire-guards, and on care in the choice of materials and design of clothing for children under seven and people over seventy.

APPENDIX E

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Department of Health for Scotland
Department of Scientific and Industrial Research
General Register Office
Ministry of Education
Ministry of Fuel and Power
Ministry of Health
Ministry of Housing and Local Government
Ministry of Labour and National Service
Ministry of Supply
Ministry of Works
Scottish Education Department

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1953

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PRINTED IN GREAT BRITAIN